

Remarks

The Applicants have amended Claim 1 to correct a typographical error. No new matter has been added. Claims 33 and 58 have been amended for ease of understanding.

Applicants note with appreciation the Examiner's helpful comments concerning Claim 12. Claim 12 has accordingly been amended to remove the confusing language. Withdrawal of the 35 U.S.C. §112 rejection is respectfully requested.

The Applicants acknowledge the rejection of various ones of the claims under 35 U.S.C. §112 with respect to "continuously coating" and "640 to 2000 outlet holes." We respectfully submit that both of these phrases are fully and completely supported in the disclosure as originally filed.

The Applicants have prepared and enclose herewith a set of tables that break down the independent claims at issue, namely Claims 1, 2, 33 and 58, into small pieces in the left-hand column of each table. The right-hand column refers to the precise location in the Specification in which full support for the language may be found. Finally, in the middle column, there is a full disclosure of the locations for support in the Applicants' priority document, JP 8-336713 (to be discussed later).

Turning first to the "continuously coating" (exactly saying, Claim 1 recites as "continuously applying") language, we respectfully submit that this is language taken directly from Claim 1 as originally filed. In particular, Claim 1 as originally filed included the step of "continuously applying...". On this basis alone, Claims 1 and 2 are supported by the original language of Claim 1.

The Applicants' reference to "screen printing" not being encompassed by "continuously applying in stripes" "from a paste applicator having 640 to 2000 outlet holes of an average diameter of 10 to 500 μm " is all within the context of the Specification as originally filed. In that regard, we invite the Examiner's attention to the detailed description of failed prior efforts in the Applicants'

Specification at pages 2 and 3, wherein the Applicants set forth the problems associated with screen printing. The Applicants' references to "continuously applying, in stripes" "from a paste applicator having 640 to 2000 outlet holes of an average diameter of 10 to 500 μm " are part and parcel of their attempt to clearly distinguish the invention over screen printing, all within the context of the Application as originally filed. Withdrawal of the 35 U.S.C. §112 rejection is respectfully requested.

The Applicants' original disclosure sets forth a paste applicator having a multiplicity of holes, with the range of holes spanning a range of 1 to 6000 outlet holes for three colors. This may be found at line 16 of page 38 of the Specification.

The Applicants' disclosure in the Specification as originally filed contains a variety of Examples outlining selected aspects of the invention. Example 4 utilizes an applicator having 640 outlet holes for one of red, green or blue phosphor paste as does Example 8. Example 9 employs 1940 outlet holes.

We, therefore, respectfully submit that the claimed range of 640 to 2000 outlet holes is fully and completely supported by the original disclosure. Withdrawal of the 35 U.S.C. §112 rejection as it applies to the terms "continuously" and "640 to 2000 outlet holes" is respectfully requested.

The Applicants acknowledge the 35 U.S.C. §103 rejection of various of the claims over Shinoda. However, we respectfully submit that it is moot in view of the claim amendment. That is, Shinoda fails to teach, "continuously applying, in stripes between barrier ribs, a phosphor paste" "from a paste applicator having 640 to 2000 outlet holes, of an average diameter of 10 to 500 μm ". What Shinoda teaches is applying, in stripes between the barrier ribs, a paste from a screen having slits, not outlet holes of an average diameter of 10 to 500 μm . This is because Shinoda uses a completely different apparatus to achieve its goals.

The Applicants acknowledge the rejection of selected claims based on Nanto alone or

collectively with i) Ravi-Chandar, ii) Osaka, iii) Igarashi, iv) Shinoda, v) Shinoda and Yamaura, vi) Shinoda, Yamaura and Mizuno, and vii) Silverbrook. The Applicants respectfully submit that Nanto is not prior art and respectfully request that it be withdrawn. This renders the rejections based on Nanto alone moot, as well as the others utilizing Nanto as the primary reference.

Nanto is not prior art inasmuch as the Applicants have already submitted an English translation of their priority document JP 08-336713, filed December 17, 1996. This clearly predates Nanto.

The Applicants have provided Tables as described above which compare the original disclosure of the priority document with the Applicants' solicited Claims 1, 2, 33 and 58. Clear support in the original priority document is shown for the language of the claims as currently solicited. There can be no doubt that the Applicants are entitled to the full effect of their Japanese priority date. As a consequence, Nanto is not prior art. Withdrawal of Nanto and the rejections based thereon is respectfully requested.

In light of the foregoing, we respectfully submit that the entire Application is now in condition for allowance, which is respectfully requested.

Respectfully submitted,



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In the Claims (Clean Copy)

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1. (Four Times Amended) A method for producing a plasma display, comprising the step of continuously applying, in stripes between barrier ribs, a phosphor paste containing a phosphor powder and an organic compound onto a substrate having a plurality of the barrier ribs formed thereon, from a paste applicator having 640 to 2000 outlet holes, of an average diameter of 10 to 500 μm , for one of red, green or blue phosphor paste.

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12. (Four Times Amended) A method for producing a plasma display, according to claim 1 or 2, wherein said barrier ribs have top surfaces, said phosphor pastes are applied while the distance between said top surfaces of the barrier ribs and the tip of each said outlet holes of the paste applicator is kept at 0.01 to 2 mm from said top surfaces.

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33. (Six Times Amended) An apparatus for producing a plasma display, comprising a means for forming a substrate with a plurality of barrier ribs on the substrate surface, a paste applicator having 640 to 2000 outlet holes, of an average diameter of 10 to 500 μm , for one of red, green or blue to face the barrier ribs of the substrate, wherein a phosphor paste supply is operatively connected to the paste applicator to continuously supply paste to the substrate, and a means for moving the substrate and said paste applicator relative to each other.

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58. (Six Times Amended) An apparatus for producing a plasma display, comprising three coating devices provided in series to deliver three phosphor pastes, a paste applicator with 640 to 2000 outlet holes, of an average diameter of 10 to 500 μm , for one of red, green or blue arranged to face the barrier ribs of the substrate, a supply means for continuously supplying phosphor pastes to the paste applicator, and wherein a moving means for moving the substrate and the paste applicator relative to each other, is provided.

Tables

| Claim 1 | JP '713 Priority Document | Applicants' Specification |
|---|---|--|
| A method for producing a plasma display, comprising the step of | All Claims; Title and paragraph 1 of Page 3 | Title; Page 5, second full paragraph, lines 1-2; Page 17, last line; Claim 1, line 1 |
| continuously applying a phosphor paste, | Claim 2, lines 2-4; Page 6, third full paragraph | Claim 1, line 2; line 2 of the second paragraph of the Abstract; Page 5, line 3; Page 39, last paragraph |
| in stripes in spaces between barrier ribs, | Page 22, last three lines; Page 28, lines 3-9 | Page 5, lines 7-14; Page 46, lines 9-13; Claim 2 |
| containing a phosphor powder and an organic compound | Claims 5, 6 and 8; the paragraph spanning Page 7 and the text extending through Page 11 through the second full paragraph | Claim 29; Page 20, last paragraph through Page 23, first full paragraph |
| onto a substrate | Fig. 1; Claim 1, line 2; Page 4, lines 2 and 3 of the last paragraph; Page 5, line 5 | Figs. 1-2; Page 15, item 4; the paragraph spanning Pages 17 and 18; first and second full paragraphs on Page 18 |
| having a plurality of the barrier ribs formed thereon | Fig. 1; Page 5, line 6; Page 6, second paragraph, line 4; Page 23, lines 3-6 of the second paragraph | Figs. 1-3; Page 5, first full paragraph, lines 4-5; Page 7, second full paragraph, all lines; Page 8, last paragraph; Page 9, first and second full paragraphs; Page 19, second full paragraph and paragraph spanning through Page 20; Page 46, last paragraph |
| from a paste applicator having 640 to 2000 outlet holes | Page 23, lines 1 and 2; Page 27, last paragraph, lines 18 and 20; Page 29, paragraph 1, line 1 | Last paragraph of Page 5; Page 38, lines 16-23; Page 71, line 10; Page 74, line 10; Page 75, line 4; Claims 5 and 6 |
| of an average diameter of 10 to 500 μm | Page 6, line 6 | Page 38, line 5; Page 60, line 15 |
| for one of red, green or blue phosphor paste | Page 5, third full paragraph, lines 1-5 and 8-11; Page 7, third full paragraph, lines 1 and 2 | Page 7, paragraph labeled "20"; Page 41, first full paragraph; Original Claim 24 |
| to form a phosphor layer. | Claim 3; Page 5, first full paragraph; Page 5, third full paragraph, lines 1-2; Page 6, last two lines | Original Claim 24; Page 25, third full paragraph; Page 37, paragraph spanning through Page 38 |

| Claim 2 | JP '713 Priority Document | Applicants' Specification |
|---|---|--|
| A method for producing a plasma display, comprising the steps of | All Claims; Title and paragraph 1 of Page 3 Fig. 1; Page 5, line 6; Page 6, second paragraph, line 4; Page 23, lines 3-6 of the second paragraph | Title; Page 5, second full paragraph, lines 1-2; Page 17, last line; Claim 1, line 1 |
| continuously coating a substrate | Claim 2, lines 2-4; Page 6, third full paragraph | Claim 1, lines 2; line 2 of the second paragraph of the Abstract; Page 5, line 3; Page 39, last paragraph |
| having a plurality of adjacent barrier ribs, | Fig. 1; Page 5, line 6; Page 6, second paragraph, line 4; Page 23, lines 3-6 of the second paragraph | Figs. 1-3; Page 5, first full paragraph, lines 4-5; Page 7, second full paragraph, all lines; Page 8, last paragraph; Page 9, first and second full paragraphs; Page 19, second full paragraph and paragraph spanning through Page 20; Page 46, last paragraph |
| with three phosphor pastes respectively containing a phosphor powder emitting light of red, green or blue | Page 5, third full paragraph, lines 1-5 and 8-11; Page 7, third full paragraph, lines 1 and 2 | Claim 29; Page 20, last paragraph through Page 23, first full paragraph |
| as stripes in spaces between said respectively adjacent barrier ribs, | Fig. 1; Page 5, line 6; Page 6, second paragraph, line 4; Page 23, lines 3-6 of the second paragraph | Fig. 1; Page 41, first full paragraph |
| from a paste applicator having 640 to 2000 outlet holes | Page 23, lines 1 and 2; Page 27, last paragraph, lines 18 and 20; Page 29, paragraph 1, line 1 | Last paragraph of Page 5; Page 38; lines 16-23; Page 69, line 13; Page 71, line 10; Page 74, line 10; Page 75, line 4; Claims 5 and 6 |
| for one of red, green or blue phosphor paste, | Page 5, third full paragraph, lines 1-5 and 8-11; Page 7, third full paragraph, line 1 and 2 | Page 7, paragraph labeled "20"; Page 41, first full paragraph; original Claim 24 |
| and heating to form a phosphor layer. | Claim 9, Claim 10, Page 5, last two lines, Page 6, last paragraph, Page 23, third full paragraph | Page 44, last paragraph |

| Claim 33 | JP '713 Priority Document | Applicants' Specification |
|--|--|--|
| An apparatus for producing a plasma display, comprising | Inherent from the method | Fig. 3 |
| a means for forming a substrate with a plurality of barrier ribs on the substrate surface | Inherent from Claim 1, line 2 and Page 22, lines 19-20; Fig. 1; Page 5, line 6; Page 6, second paragraph, line 4; Page 23, lines 3-6 of the second paragraph | Fig. 1 and Fig. 3, items 4 and 7 |
| a paste applicator having 640 to 2000 outlet holes, of an average diameter of 10 to 500 μm , for one of red, green or blue phosphor paste, to face the barrier ribs of the substrate, | Fig. 1; Page 6, line 6; Page 23, lines 1 and 2; Page 27, last paragraph, lines 1 and 2; Page 29, paragraph 1, line 1 | Last paragraph of Page 5; Page 38, line 5 and lines 16-23; Page 60, line 15; Page 69, line 13; Page 71, line 10; Page 74, line 10; Page 75, line 4; Claims 5 and 6 |
| wherein a phosphor paste supply is operatively connected to the paste applicator | Page 27, first full paragraph | Fig. 4 |
| to continuously supply paste to the substrate, | Claim 2, lines 2-4; Page 6, third full paragraph | Claim 1, line 2; line 2 of the second paragraph of the Abstract; Page 5, line 3; Page 39, last paragraph |
| and a means for moving the substrate and said paste applicator relative to each other. | Fig. 1 shows relative movement | Fig. 1 and Fig. 4 |

| Claim 58 | JP '713 Priority Document | Applicants' Specification |
|---|--|---|
| An apparatus for producing a plasma display, comprising | Inherent from method | Fig. 3 |
| three coating devices provided in series to deliver three phosphor pastes, | Page 5, lines 14-20 | Fig. 7 |
| a paste applicator with 640 to 2000 outlet holes, of an average diameter of 10 to 500 μ , for one of red, green or blue phosphor paste, arranged to face the barrier ribs of the substrate, | Page 23, lines 1 and 2; Page 27, last paragraph, lines 1 and 2; Page 29, paragraph 1, line 1 | Last paragraph of Page 5; Page 38, lines 16-23; Page 69, line 13; Page 71, line 10; Page 74, line 10; Page 75, line 4; Claims 5 and 6 |
| a supply means for continuously supplying phosphor pastes to the paste applicator, | Page 27, first full paragraph | Fig. 4; Claim 1, line 2; line 2 of the second paragraph of the Abstract; Page 5, line 3; Page 39, last paragraph |
| and wherein a moving means for moving the substrate and the paste applicator relative to each other, is provided. | Fig. 1 shows relative movement | Fig. 1 and Fig. 4 |



1762
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: DISPLAY



35811

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